

Southwest 2021 Potato (*Solanum jamesii* and *S. fendleri*) Collecting Trip Report

Cloudcroft NM to Big Bend, TX. August 24 – Sept 1, 2021

Collections: BBF 410-424. See Table for details.

Participants: John (JB = USDA/ARS) and Ingrid (IB) Bamberg, Charles J. (Chico) Fernandez (CF). Full participant affiliation details available on GRIN linked to each collection PI.

Summary logistics and research interests. CF participated in first half of expedition. Aug 25th morning was interview by James Dinneen which contributed to article in The Counter magazine. CF rented Nissan Versa from El Paso Enterprise for exploration of Sacramento Ranger District of Lincoln NF to the S of Cloudcroft from lodging base in Alamogordo. JB & IB continued Aug 28th with Toyota Rav4 from El Paso to W Texas sites. This was our 30th consecutive year of SW collecting. Covid-19 again resulted in self-funded status for JB. In 2019 we collected multiple DNA leaf samples from 12 *S. jamesii* (jam) populations for a separate research initiative with UT and OH colleagues. Collecting DNA from an additional 12 sites was thwarted by Covid in 2020, so a goal in 2021 was to contribute to completion of that DNA-collection work.

Site significance, previous observations and collections. The Lincoln NF target area between Cloudcroft and Carlsbad had very little past exploration by USPG despite ostensibly good habitat and accessibility. Other sites were reported in herbspecs at SEINet (see Appendix). We also wished to confirm the few sites known in W Texas and find more, particularly find the first germplasm in Big Bend, which would be the southern limit of the wild potato range in the USA. The 2021 trip was about three weeks earlier than usual. Fruit is the preferred collection type, and in some cases we wished we would have been on site later when fruit would have been more mature.

Map-based scouting, rainfall, and other preparations. The target sites had remarkably high rainfall in contrast to severe drought elsewhere in the west. As usual, GoogleEarth was used to identify likely habitats in advance which were plotted on Delorme Topo10 on a laptop with that spotted current location with a simple plug-in GPS receiver. Spots of interest were uploaded to Garmin handheld GPS for use in the field. Rainfall was tracked through the AHPS (Advanced Hydrologic Prediction Service) of National Weather Service.

Land accessibility issues. Nearly all sites were accessible by paved roads on public land. However, as in 2020, roads that appeared to be public on maps were signed as private in two cases.

Costs. JB & IB trip expenses = \$3100, CF = \$1271.

Future work. Success this year reinforced the importance of keeping exploration plans flexible to follow the rainfall in years of widespread regional drought. As usual, visiting particular sites often brought to our attention additional nearby spots that could be explored if more time was available. For example, we have a single jam collection site in the Franklin Mountains near El Paso—several days might be devoted to finding more. In the Lincoln NF of NM, now having established the abundance of potato in the Sacramento district in a rainy year, the Guadalupe district should be similarly explored, but good roads may be fewer there. We have one collection of each species from the Organ Mountains near Organ, NM, but more exploration could be done, especially at Dripping Springs where there is herbspec documentation. To W of Sacramento to Potato Canyon Road and Potato Canyon should be pursued with a more robust vehicle after finding out more about intent of posted prohibitions—especially in light of abundant fen found just to W on Timberon road. We looked at Big Bend's Green Gulch where a herbspec reported fen (see Appendix), but likely habitat on the

Chisos crests should be explored on a trip when we had time and gear for overnight camping. Rock outcroppings similar to those at Bookshelf site are also found close to 166 at about 10 miles N on Rock Pile Ranch road.

Deposit of records, germplasm and files. US Potato Genebank, 4312 Hwy 42, Sturgeon Bay, WI, 54235. 920-743-5406. john.bamberg@usda.gov. Query BBF collector prefix or individual PI numbers in GRIN. Detailed trip log, GPS track and Waypoints files, and additional photos and miscellaneous notes are available from JB at USPG.

Daily Itinerary

Monday, August 23. JB and IB drive to MSN to pick up leaf-drying silica and tea bags for DNA sampling from A. del Rio and stage for early flight the next day.

Tuesday, August 24. Fly to ELP-- JB and IB from MSN, and CF from GRB. Rent Nissan Versa and drive to Alamogordo, stopping to look at previous collection site 595777 at San Augustin pass near Organ, NM. Looked incredibly green but no jam found. Continue to Home2 Suites hotel in Alamogordo.

Wednesday, August 25. Drive to Cloudcroft and find a few small *S. fendleri* (fen) plants around Family Dollar store parking lot (301 James Canyon highway). Meet James Dinneen (JD) at coffeeshop for interview for The Counter Magazine article, then show JD those fen at Cloudcroft and drive to observe nearby jam 691564 and fen 691565 site at noon. Scout sites for later exploration along drive on 130 back toward Cloudcroft, asking permission to look later at Sivells Baptist camp. By 2PM back to Apache Canyon Rd to revisit sites of original expedition in 1992, e.g., at Sleepy Grass campground. Observed mature flowering fen stands at Apache and Black Bear camps but did not collect, considering that we had sufficient fen representation of this location at USPG. Late lunch at LePree's in Cloudcroft at 3PM. Back to Alamogordo to lodge.

Thursday, August 26. After hotel breakfast, drive S at 7AM on 54 to see if we could approach Piñon from W on 506. Not a particularly bad gravel road to start, but slow, and with low clearance sedan decided it would be just as well to retrace N to Alamogordo and then take paved Cloudcroft > Mayhill > Piñon. At 9AM on 82, likely close to site of Hawkes 1152, PI 279278 at roadside pull-off at Tunnel site. [**Collection BBF 411**]. At 10AM backtrack W to West Side Road going S from High Rolls to pursue previous Worthington herbspec sites (See Table). But good creek valley habitat noted just over one mile from 82 prompted stop and exploration to E at black water tank just to E off West Side Road. [**Collection BBF 410**]. Continue to Cloudcroft for gas and to Piñon on 24 for noon lunch in general store. Owner remarked that this year's rainfall was much more than in years of the past decade, but maybe about average 40+ years ago. This illustrates how many years of observations in a region could give the mistaken impression that it is inhospitable for potato, while they are in fact present in abundance but waiting for the rains that would make that evident. Approach Piñon cemetery, but road was rough. Look instead at electric utility station on cemetery road just across 24 from the Piñon post office. [**Collection BBF 412**]. Approach Avis cemetery along retrace N on 24 and roadside at several sites that looked favorable to ranch driveway at the mile 10 marker. [**Collection BBF 413**]. N on 24 to 521 = Agua Chaquita Road (paved) near Weed and W to Sacramento. A few miles W of Sacramento at the split to Hay Canyon, signs suggest that the public is not welcome. We wanted to check how one might get all the way W to the Timbron road, and particularly find out about the nearby Potato Canyon on the Potato Canyon Road. As it was getting late in the day and we wished to explore the Baptist camp where we had obtained permission, we decided to not take time to pursue that, but return E to search along 521 toward Sacramento [**Collections BBF 414 (jam) and BBF 415 (fen)**]. Then drove to Sacramento town *per se* and looked at Christian camp. Then return to 24 and 130 to Sivells Baptist Camp at 4PM. [**Collection BBF 416**]. Return to Alamogordo.

Friday, August 27. After hotel breakfast to Cloudcroft and S on Sunspot Highway = 6563 (well paved) to Timberon by 9AM. Looked various places in Timberon, and inquired at Post Office. Made three jam collections later combined into one, all very close to airstrip. First at small lake at NE corner of airstrip, then around E edge of cemetery at S end of airstrip, then at T intersection at N end of airstrip (Sacramento River Drive and Bob White roads). [Collections BBF 417]. Return on Sunspot highway N stopping and collecting fen at roadside trailheads. [Collections BBF 418, 419, 420, 421]. Late afternoon snacks and coffee Cloudcroft. Heavy rains. Then look S of 82 at Cloudcroft town on N side of Grand boulevard between 11th and 9th streets to observe one small fen growing on top of large boulder and among rocks (not collected). At 4PM at Deerhead Camp near split of Sunspot Road 6563 and 130 S of Cloudcroft, observed fen and collected new site for jam. [Collection BBF 422]. Return to Alamogordo.

Saturday, August 28. After hotel checkout drive to El Paso airport for CF departure, who carried home all propagules collected thus far. JB & IB rent Toyota Rav4 from Enterprise and continue at 9:30 AM on 10 toward Big Bend National Park. At 3PM at about 5 miles W of Alpine at Paisano Pass (Paradise Canyon) at roadside pull-off previously fen herbspec site (see Appendix). Looked very good. Continue to Big Bend NP arriving about 7PM. Late supper and lodge at Chisos Mountains Lodge.

Sunday, August 29. Picnic breakfast on patio of Chisos mountain lodgings. Park at Lost Mine trailhead. Search extensively in valleys to E of Basin Lodge and Camp along Panther junction road and where we assumed fen referenced in herbspec (see Appendix) in Green Gulch. Note: If fen was indeed found here at the very low 4800 ft, it suggests ephemeral drift down from more abundant pops on mountaintops where it would have a more stable environment for long term establishment. But we did not have time or equipment to hike and camp to Emory Peak and crest environs. Depart Big Bend 1PM and drive to Alpine and Ft. Davis to check in at Stone Village cabins, then N on 118 to scout. Encouraging to see strong stands of both species at Madera Canyon roadside park and other places (e.g. PI 664016). Return to Ft. Davis for supper at Ft. Davis Drugstore.

Monday, August 30. Breakfast at 7AM at grocery store next door. Return N on 118 to collect new jam site to W across 118 from a big stone water tank with windmill [Collection BBF 423]. To The Nature Conservancy entrance gate and down dirt road to fork with Right Hand road. Then hike to site of 664024 for DNA leaf collection. Return to Ft. Davis for lunch and gas. Then N on 118 to fork with 166 S (well paved) that skirts the W side of Davis Mountains. Previous herbspec...

<https://swbiodiversity.org/seinet/collections/individual/index.php?occid=27427884&clid=0>

...placed jam in area. To high point of 166 at H-O pass where big boulder outcroppings are right next to roadway look like books on a bookshelf. Wait for heavy rain to stop. [Collection BBF 424]. This new Bookshelf collection is about 4 miles by air from George Yatskievych et. al 16-257 [2016] websited herbspec above and about eight miles by air from our own collections near TNC Madera Canyon (e.g., PI 664024). Return N on 166 to 118 and N to 10 and Pecos, then 285 to Carlsbad to lodge at Stevens Inn Motel.

Tuesday, August 31. Early breakfast at hotel and Blue House Bakery then Albertson's for picnic groceries. N on 285 to 135 = Queen Road (well paved) all the way to Dog Canyon park just over TX border. Arrive about 10AM and collect leaves for DNA (germplasm already collected as 595782). Try to visit nearby site of 651529 on Klondike Gap road, but road posted as private. Start back to Carlsbad about 5PM, stopping to look several places including Frank A. Kindel Memorial at Queen. To La Tienda grocery in Carlsbad for deli bar supper and lodge again at Stevens Inn.

Wednesday, September 1. Take 62 S to 180 E returning to El Paso. Stopped look at Pine Springs trailhead for Guadalupe National Park, where it seemed very good habitat for jam. Return to El Paso and Transmountain

Loop 375 site of 595778 at Smugglers Pass. Trail posted as closed, but we had a permit. Was extremely green, looking good for potato, but saw none. Not sure if this Ron Colman trail is the one we were on for 595778, as JB does not recall going down through a valley-- there is another closed trail just to the E going up to towers. A USPG collecting team in 2019 (not including JB and IB) found nothing. To El Paso city to Puerto Vallarta Grill for early supper and Extended Stay America lodging on S edge of airport.

Thursday, September 2. Fly early morning ELP to MSN. Give DNA samples to Alfonso del Rio and drive home.

Table. Germplasm collections and observations detail

	Type ¹	sp.	Aug 2021 date	BBF	PI	plants coll (survive)	Tubers collected	Plants and Tubertlings increased	fruits	seeds collected ⁵	Plants and seedlings from seeds increased	Seed increase method	State
Site													
West Side Road Site.	N	jam	26	410	699190		12	2				pending ²	NM
Tunnel Site.	N	jam	26	411	699191	4 (4)	8	4				Sib	NM
Piñon Site.	N	jam	26	412	699192	5 (2)	3	3				Out ³	NM
Mile 10 site.	N	jam	26	413	699193	5 (5)	2	6				Out	NM
Sac-W jam site.	N	jam	26	414	699194	2 (2)		2				Out	NM
Sac-W fen site.	N	fen	26	415	699195	1 (1)		1	1	61	3	Sib	NM
Baptist site.	N	jam	26	416	699196	7 (7)	1	7				Sib	NM
Timberon sites (3) combined	N	jam	27	417a		3 (3)	11						
	N	jam	27	417b	699197							Sib	NM
	N	jam	27	417c									
Apple Tree trailhead site.	N	fen	27	418	699198				10	270	2	sib	NM
Waterfall Trailhead site.	N	fen	27	419	699199				1	17	2	sib	NM
1000 mile Trailhead site.	N	fen	27	420	699200				16	470	5	sib	NM
Cathey Trailhead site.	N	fen	27	421	699201				2	162	10	sib	NM
Deerhead Camp site.	N	jam	27	422	699202	5 (5)		0	5			in vitro ⁴	NM
Windmill 118 site.	N	jam	30	423	699203		3	pending	2			pending	TX
Bookshelf 166 site.	N	jam	30	424	699204		11	pending	1			pending	TX
¹ H=Herbarium site, R= Recollection site, N = new site seeds sprouting on Oct 7, 2021 tubers only collected ² not sprouted or flowering on Jan1st ³ make WRF and Pinon also into BCjam project ⁴ male and female sterile ⁵ twenty of which were planted for first seed increase													

List and narratives for collections and status

PI 699190. BBF 410. *S. jamesii*. United States. New Mexico. Near Cloudcroft. Between Cloudcroft and Alamogordo. About 1.5 miles S of 82 on West Side Road (CR A061). Lane to E where there is a black water tank and up the valley to the E for about 400 ft. At WSG N32.93515 x W105.83682 and 6896 ft. West Side Road Site. August 26, 2021. Many scattered plants all sizes to 10 inches, some lush green and flowering, some with insect damage. Wet clay, short oak scrub, some in partial shade, others in full sun, various herbs and grass. Collected 12 tubers.

PI 699191. BBF 411. *S. jamesii*. United States. New Mexico. Near Cloudcroft. About 7 miles W of Cloudcroft on 82 at vista pulloff at W end of tunnel and about 100 ft down steep slope N toward the canyon. At WSG N32.946329 x W105.860263 and 6075 ft. Tunnel Site. August 26, 2021. At least 75 plants, mostly tall 10 to 12 inches, flowering, almost ripe fruit on some, some grazed and with insect damage. Dark soil, boulders, junipers, morning glories, extreme N-facing exposure. Collected 8 tubers.

PI 699192. BBF 412. *S. jamesii*. United States. New Mexico. Near Piñon. About 40 miles SE of Cloudcroft at Piñon town. Just across 24 to E from store and post office at the electric utility site on the gravel road to cemetery. Along S side boundary fence. At WSG N32.619033 x W105.394517 and 6119 ft. Piñon Site. August 26, 2021. About 10 green plants to 6 inches. Dry clay soil in grass with cactus. Collected 3 tubers.

PI 699193. BBF 413. *S. jamesii*. United States. New Mexico. Near Piñon. About 27 miles SE of Cloudcroft and 14 miles N of Piñon at 10 mile marker on 24 at ranch road driveway to W. Most under one tree in ditch just N of driveway and in ditch to N. At WSG N32.771533 x W105.4643 and 6696 ft. Mile10 site. August 26, 2021. To 12 inches, flowering, robust green plants. Under large juniper near pine trees, a few scattered in the open grassy ditch among downed tree branches, moist brown soil. Collected 2 tubers.

PI 699194. BBF 414. *S. jamesii*. United States. New Mexico. Near Sacramento. Along 521 = Agua Chaquita Canyon Road about 2.3 miles W of Sacramento town and about 0.20 miles E of fork to Hay Canyon Road. Just off S roadside in ditch under trees. At WSG N32.79345 x W105.60135 and 7466 ft. Sac-W jam site. August 26, 2021. Only a few spindly plants about 3 inches tall. Sandy soil under Ponderosa pine in needle mulch. Collected 2 plants.

PI 699195. BBF 415. *S. fendleri*. United States. New Mexico. Near Sacramento. Along 521 = Agua Chaquita Canyon Road about 2.3 miles W of Sacramento and about 0.20 miles E of fork to Hay Canyon Road. Just off S roadside in ditch under trees. At WSG N32.79345 x W105.60135 and 7466 ft. Sac-W fen site. August 26, 2021. About 15 plants to almost 12 inches tall, healthy and green. Under Ponderosa pine, sandy soil, needle mulch, sticks, grass. Collected one plant that had one immature berry.

PI 699196. BBF 416. *S. jamesii*. United States. New Mexico. Near Cloudcroft. On 130 = Cox Canyon Road about 12.5 miles SE from Cloudcroft at Sivells Baptist retreat center. About 100 ft SW of basketball court on W side of wash up the slope and under trees. At WSG N32.860302 x W105.60405 and 7377 ft. Baptist site. August 26, 2021. About 30 scattered plants, some to 10 inches, one with buds ready to flower. On SE slope in heavy dark soil, tall pines nearby, needles, mostly in the open, among downed logs and rocks. Collected 7 plants.

PI 699197. BBF 417a. *S. jamesii*. United States. New Mexico. Near Cloudcroft. About 32 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at Timberon town. NE of N end of Timberon airstrip about 200 ft. E of a small recreational lake. At WSG N32.642333 x W105.6898 and 7074 ft. Timberon lake site combined

with two other Timberon sites. August 27, 2021. About 20 plants, 4 to 6 inches, green. Flat area in small delta formed by fallen tree trunks, completely in open, silty soil, sparse grass. Collected 3 plants.

PI 699197. BBF 417b. *S. jamesii*. United States. New Mexico. Near Cloudcroft. About 32 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at Timberon town. SE of S end of Timberon airstrip at cemetery, under trees along SE border. At WSG N32.629542 x W105.680342 and 6916 ft. Timberon Cemetery site combined with two other Timberon collections. August 27, 2021. More than 75 plants, green, tallest 6-8 inches, some spindly. In needle mulch under junipers, sparse grass. Collected 11 tubers.

PI 699197. BBF 417c. *S. jamesii*. United States. New Mexico. Near Cloudcroft. About 32 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at Timberon town. T intersection at N end of airstrip. On slope in NW corner of intersection. At WSG N32.629542 x W105.680342 and 6960 ft. Timberon T site combined with two other Timberon collections. August 27, 2021. About 20 plants, most small to 10 inches, some eaten by insects. SE-facing open slope, brown soil, needles. Collected 11 tubers.

PI 699198. BBF 418. *S. fendleri*. United States. New Mexico. Near Cloudcroft. About 24 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at AppleTree trailhead. Drainage just below SW edge of parking lot. At WSG N32.71375 x W105.74775 and 7800 ft. Apple Tree Trailhead site. August 27, 2021. Hundreds of mature plants in perfect condition, some 2 ft tall with 3 inch wide leaflets, flowering and clusters of almost-ripe fruit, some heavily grazed. Mostly in open in medium brown soil, rocky, other herbs. Collected 10 fruit.

PI 699199. BBF 419. *S. fendleri*. United States. New Mexico. Near Cloudcroft. About 23.5 miles S of Cloudcroft on Sunspot Highway = Rt 6563. Around parking lot, steep slope S of highway, and along trail as it descends to river bottoms. At WSG N 32.714187° x W105.752590° and 7846 ft. Waterfall Trailhead site. August 27, 2021. Many very large, mature, healthy plants, some over 2 ft tall, often flowering and with clusters of almost-ripe fruit. In steep rocky slope or in flats protected by large fallen logs, growing in Ponderosa bark in full sun. Collected one fruit.

PI 699200. BBF 420. *S. fendleri*. United States. New Mexico. Near Cloudcroft. About 20 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at 1000 mile trailhead. All around horse corral near parking pulloff. At WSG N32.754382 x W105.7793326 and 7930 ft. 1000 mile Trailhead site. August 27, 2021. Hundreds of plants, some very large, mature and flowering with almost-ripe fruit, but some spindly. West facing valley with shade of very large firs and protected by horse corral fence. Collected 16 fruit.

PI 699201. BBF 421. *S. fendleri*. United States. New Mexico. Near Cloudcroft. About 15 miles S of Cloudcroft on Sunspot Highway = Rt 6563 at Cathey trailhead parking lot. In gravel slopes on both E and W edges of parking lot. At WSG N 32.803807° x W105.805047° and 9460 ft. Cathey Trailhead site. August 27, 2021. Hundreds of plants of all sizes up to 10 inches, mostly robust and green but little flowering. Often in open in pure gravel, some under brush and among grass. Collected 2 fruit.

PI 699202. BBF 422. *S. jamesii*. United States. New Mexico. Near Cloudcroft. At the S edge of Cloudcroft on Sunspot Highway = Rt 6563 at Deerhead campground. Right on edge of paved road across from campsite 11 and near outhouse. At WSG N32.94335° x W105.74616° and 8616 ft. Deerhead Camp site. August 27, 2021. A few dozen gracile but green plants to 6 inches. In needle mulch and gravel roadside mostly shaded. Collected 5 plants.

PI 699203. BBF 423. *S. jamesii*. United States. Texas. Near Ft. Davis. On 118 NW of Ft. Davis at crossing of Right Hand Creek only about 1/3 mile E of Madera Canyon Roadside Park. W side of 118 across the road from windmill and large stone cistern. At WSG N 30.707370° x W104.099000° and 5849 ft. Windmill 118

site. August 30, 2021. About 10 plants, most less than 6 inches, some grazed. Flats under large oak in light brown soil likely disturbed by wild pigs rooting, and among grass under fence. Collected 3 tubers.

PI 699204. BBF 424. *S. jamesii*. United States. Texas. Near Ft. Davis. On 166 that skirts W side of Davis Mountains. About 8 miles SW of the fork with 118 at highest elevation point (H-O) pass with rock outcroppings just off both sides of the road, and with W aspect looking like books on a shelf. Among rocks on both sides of the road. At WSG N30.685070° x W104.243750° and 6220 ft. Bookshelf 166 site. August 30, 2021. Hundreds of scattered plants, most small but usually green and healthy. Some mature enough to produce mature daughter tubers. No trees, but in gentle slopes under protection of huge boulders, sometimes also under small brush, among grasses and other herbs. Collected 3 tubers.

Habitat pictures and Maps



San Augustin Pass and Organ Mountains

On way from El Paso to Alamogordo near Organ at roadside pulloff vista. Very green this year but found no jam as PI 595777, but did not return for further explorations like at Dripping Springs.



A



B

**Sites near
Cloudfcroft
intentionally only
observed or
DNA-sampled,
not collected**

A: In Cloudfcroft town beside Family Dollar parking lot.

B: Mary White site of jam PI 691564 and fen PI 691565 collected in 2019.



B



C

C: Black Bear Campground near Cloudfcroft town.

D: S edge of Cloudfcroft Zenith town park on Grand street.



C



C



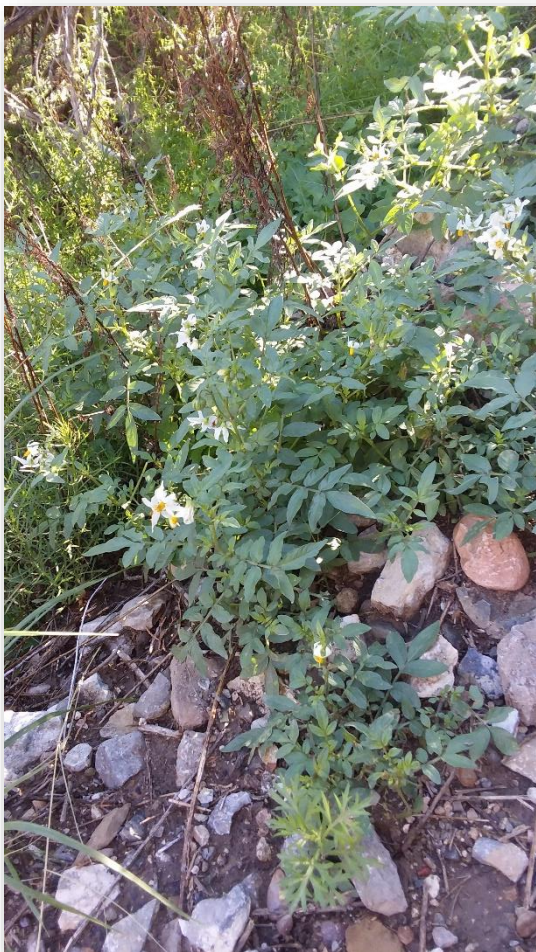
D

West of Cloudcroft on 82 sites, Tunnel and West Side Road

Right: Pulloff parking lot at
Tunnel (facing N).

Below: Large flowering jam
with immature fruit in steep N-
facing rocky slope (Tunnel site).

Lower right: Flat grassy delta to
E side of West Side Road below
High Rolls.





Piñon and Mile10 sites

Above: At Piñon town in grass and herbs under fence at electric power station.

Left : Mile 10 site N of Piñon looking N in W ditch of 24.



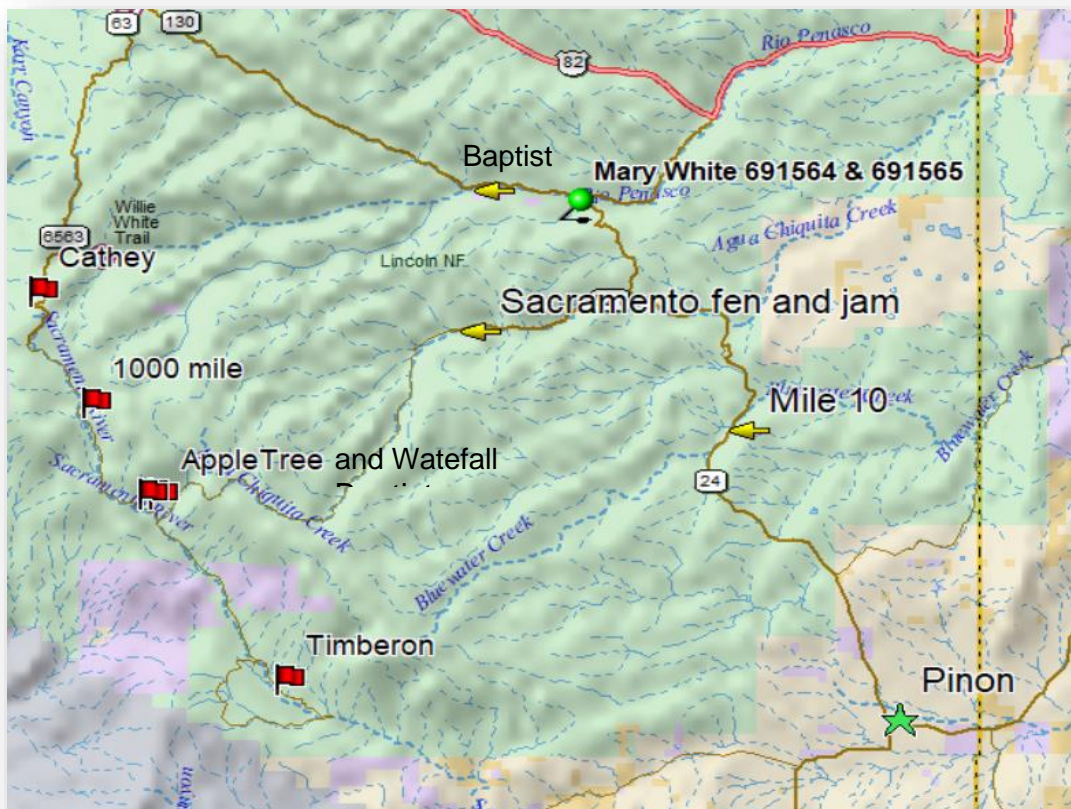
Baptist Camp site

Left: On steep wooded slope with rocks and herbs.

Below: Creek bottoms looking W.



Sacramento Ranger District sites





Sites along Sunspot highway

Large fen found at Trailheads Appletree, Waterfall, 1,000 mile, and Cathey between Cloudcroft and Timberon.



Lower left at Deerhead close to Cloudcroft town, like at Black Bear campground, fen was also found. But only new jam along Deerhead campground driveway was collected.



Sites along Sunspot highway

Top: Timberon cemetery habitat and plant (left). Large fen growing out of mats of shed Ponderosa bark (below) and at bases of Douglas firs (right).



Big Bend

Looked unsuccessfully in relatively low Chiso Basin area and along Panther Junction road at creeks and in Green Gulch as per herbspec report of fen. Although habitat looked quite good, high crests like Emory Peak seem more typical and need exploration with at least one camping night.



Sites N of Ft. Davis in TX

Top left: Large fen in rocks at roadside near floodgauge at previous site PI 664016.
Top right: New jam collection “Windmill” along 118 not far from, and with similar habitat to The Nature Conservancy DNA collection at site of PI 664024 (bottom).





Bookshelf site
looking from road
to the E (left) and
W (right).





Dog Canyon DNA Collection.
Very ancient human habitation site. First jam seen here in 1996 (PI 595782), absent in 2011. Very green in 2021 with robust stand of widely scattered plants.



El Paso transmountain loop road (375) at Smuggler Pass.

Very green but could not find jam population originally collected as PI 595778 and also not found in 2019 visit to site.



APPENDIX

West Texas herbarium specimens at Paisano Pass west of Alpine and Big Bend, both unusually low for *fendleri* (< 5000 ft).



PRC : TEX

University of Texas Herbarium

Catalog #: TEX00332470

Taxon: *Solanum stoloniferum* Schltdl. & Bchž.

Family: Solanaceae

Determiner: David M. Spooner (WIS), 2001

Collector: Barton H. Warnock 13476

Date: 30 August 1965

Locality: United States, Texas, BREWSTER, Green Gulch; Big Bend National Park. Elev. 4800 ft.

Habitat and Description: Infrequent perennial; igneous soil.

Specimen Images



Large Version

Record Id: dc4c01a5-5ffc-4839-af6c-1ba6721a8b60

Usage Rights: CC0 1.0 (Public-domain)

For additional information on this specimen, please contact: George Yatskievych (george.yatskievych@austin.utexas.edu)

Details

Comments

Linked Resources



University of Texas Herbarium

PRC : TEX

Catalog #: TEX00019702

Taxon: *Solanum stoloniferum* Schtdl. & Bche.

Family: Solanaceae

Determiner: David M. Spooner (WIS), 2001

[Show Determination History](#)

Collector: O. E. Sperry T89

Date: 22 September 1936

Locality: United States, Texas, BREWSTER, 5 mi. W of Alpine.

Habitat and Description: In protection of iaks in rich soil of Paradise Canyon.

Specimen Images



[Large Version](#)

Record Id: 72589783-6d7e-41a9-afbe-3a7a2cefd099

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